SunPC™

Just the Facts

(SunWIN token# 65948)

Sun microsystems®

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SunPC™ Product Positioning

Introduction

SunPC™ is a cost-effective hardware and software product that provides full PC compatibility to customers running Microsoft MS-DOS and Windows (3.x and 95) applications on their Solaris™ OS-based Sun™ workstations. SunPC brings together the ease of use of DOS and Windows programs and the powerful features of the Solaris operating environment, giving users access to powerful workgroup technology without sacrificing access to DOS and Windows applications.

Key Messages

The SunPC product:

- Provides full PC compatibility with Microsoft Windows (3.x and 95) applications on Sun workstations
- Is attractive to customers who:
  - Require a low-cost solution for running Windows (3.x, 95) applications and Solaris applications on the same workstation
  - Require personal control of Microsoft Windows application environment
  - Expect predictable performance when running their PC applications
  - Need a mid- to high-end 486 PC level of performance, depending upon user application

Target Users and Markets

The target customers for SunPC are Sun workstation users with a need to run Microsoft DOS or Windows applications along with their Solaris applications. SunPC fits well in all market segments that Sun has targeted. Different users in an enterprise may have different PC applications, but the basic requirement is still the same. Customers run their PC applications on the same workstation as their Solaris applications in order to avoid having a second system on their desktop. SunPC delivers predictable performance and allows users to maintain complete control of their PC environment. SunPC is attractive to low-end workstation users, since SunPC performance is better than software-emulation performance on these low-end workstations. SunPC is an excellent product for PC application users who are satisfied with 486-level performance. Some typical ways the SunPC card is being used include running Microsoft Windows productivity tools, such as Office 95 and Office 97, and Microsoft Mail Exchange, to standardize on a mail system where customers have many PCs and Sun workstations installed.

Product Family Placement

SunPC is one of several solutions that provide customers the ability to run PC applications on Sun workstations. There are two products available today from Insignia Solutions that provide the same capability. SoftWindows 95 is a client-server software-emulation product that allows customers to run MS-DOS and Windows (3.x, 95) on Solaris-based Sun workstations. Copies of SoftWindows 95 can reside on a server, and users can check out copies to run their PC applications. Another software product available from Insignia is NTRIGUE. It is also a client-server product, but unlike SoftWindows 95, it is not an emulation product. NTRIGUE server software allows customers to run PC application on an Intel NT-based server and send display back to a Sun workstation or JavaStation™. The client software is available to Sun users at no charge. SoftWindows 95 and the server software must be purchased from Insignia Solutions, Inc.

SunPC Product Positioning *(cont.)*

Availability

SunPC 4.2 is available as follows:

- First available.. November 11, 1997
- Volume shipping .... November 11, 1997

SunPC™ System Architecture

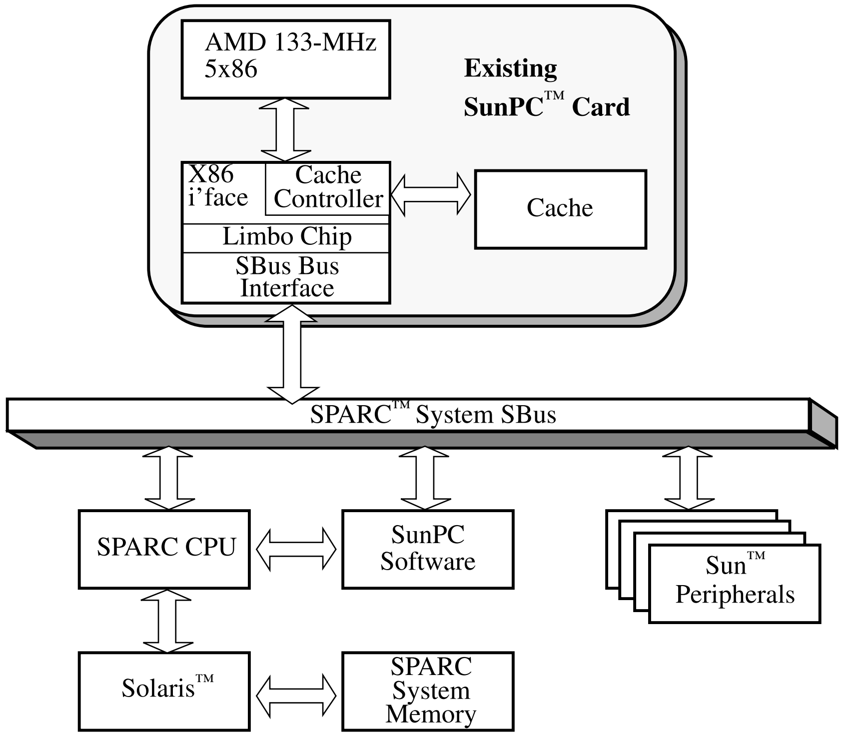

Figure 1. SunPC™ system architecture overview

Technology Overview

SunPC™ uses a patented co-processor technology along with software to run Microsoft DOS and Windows (3.x and 95) applications. Unlike software emulators such as Wabi™ and Insignia's SoftWindows, SunPC utilizes a co-processor (133-MHz, 5x86 AMD) on-board the SBus card. Applications run natively on the SunPC card. The card does require an SBus slot in the Sun™ workstation.

SunPC runs applications residing on both Solaris™ networks and PC-LANs. Users can access both Solaris operating system and PC network resources such as printers, CD-ROM drives, and file systems—directly from their PC applications. Cut and paste is available between MS-DOS and Solaris applications.

SunPC supports the NetWare Open DataLink Interface (ODI), allowing access to TCP/IP, IPX™/SPX, and NetBEUI-based networks. SunPC provides full NetWare client support and supports OpenWindows™ and Motif Solaris window environments. SunPC also runs under the Common Desktop Environment (CDE) window manager for ease of use and ease of configuration.

Technical Information

Platforms Supported	All systems based on Sun SPARC™ or UltraSPARC™ (except SPARCserver™, SPARCstation™ Voyager™, and X-terminal systems)
Operating system	Solaris 2.4 and above
Processor	133 MHz 5x86 AMD
Random-access memory (RAM)	32 MB minimum; 48 MB recommended
Disk space	12 MB for SunPC and MS-DOS; additional 10 MB for Microsoft Windows
Networks	TCP/IP, IPX/SPX and NetBEUI-based networks via NetWare
MS-DOS and Microsoft Windows applications	Microsoft Windows 3.11 or 95 operating system is required to run the PC applications. Users are required to purchase appropriate Windows OS.
Graphics support	Microsoft MS-DOS: Super VGA, EGA, CGA, Hercules Microsoft Windows: large screen 1024 x 768
X11 windows environment	SunPC: OpenWindows, Motif, Common Desktop Environment
Hard drives	Emulates C: and D: hard drives and E: through Z: networked drives
Floppy drive	Emulates A: hard drive using internal 3.5-inch floppy drive
Ports	COM1 and COM2 serial ports Emulates LPT ports to redirect output to local and network printers or files
Maximum number of sessions	One; three additional sessions in 80286 software emulation mode
Adjustable PC memory	One megabyte standard, up to 16 MB extended and/or expanded memory; (memory for SunPC software is allocated from and may be limited by workstation memory and swap space)
Mouse	Emulates Microsoft mouse functionality
Keyboards	All current Sun keyboards

SunPC Key Features and Benefits

- **Features**
  - Coprocessor card, 133-MHz 5x86 AMD
  - Full PC compatibility
  - Large screen windows display
  - Transparent access to Solaris- and NetWare-based filesystems, printers and CD-ROM drives
  - Access to PC applications from Solaris and NetWare networks
- **Benefits**
  - Single systems to run both Solaris and PC applications provides best of both worlds and reduces customers overall computer spending
  - Runs Microsoft MS-DOS and Windows (3.x and 95) applications, whether off-the-shelf or developed in-house
  - Ability to view larger spreadsheets or other documents
  - Resource sharing reduces costs and increases user flexibility
  - Availability of thousands of PC applications

The SunPC™ Software Package

The SunPC™ package includes a CD-ROM with the SunPC system software, OpenDOS and the user installation guide in AnswerBook™ format that can be installed on-line. OpenDOS is fully compatible with MS-DOS. Also included in the package are the release notes and a read-me-first document. Users wishing to run Microsoft Windows 95 applications must order Microsoft Windows 3.x and 95 operating system.

Installation Notes and Recommendations

Although most users have already set up PCs and installed the Windows operating system themselves, it is highly recommended that users refer to the on-line SunPC documentation prior to installing Windows 95 and associated applications. The SunPC allows the workstation to operate like a PC, but requires the workstation to share resources with the Sun™ workstation environment. Refer to the sections that contain installation checklists and performance tips that will help with the set up, installation and performance tuning.

Upgrading existing SunPC software from SunPC 4.1 to 4.2 is not necessary. However, if the customer upgrades to Solaris™ 2.6 or to an UltraSPARC™-based workstation, or wants to run Windows 95 applications, the customer must install the latest patch for SunPC 4.1.The patch is available from the support service provider, or it can be downloaded from the "Unbundled Products" section of the SunService℠ Public Patch Page web site:

Be sure to read the section in the new-users' guide section that contain the checklists and performance tips when installing Windows 95. This documentation is included in the download of the patch.

SunPC Server

SunPC Server Information

SunPC cannot be operated in a server environment. Up to three SunPC sessions can run on a single card, on one system, depending on system memory.

Network Interoperability

SunPC supports the NetWare Open Datalink Interface (ODI), allowing access to TCP/IP, IPX™/SPX and NetBEUI-based networks.

SunPC 4.2 includes an ODI network driver, which provides support for ODI-compliant network adapter hardware and software.

The SunPC ODI driver makes it possible to use IPX, TCP/IP, and/or NetBEUI protocol stacks to connect to a variety of network servers from SunPC windows. For example, an IPX stack lets the user connect to Novell NetWare networks; TCP/IP stacks are used with NFS™ networks; and NetBEUI provides access to LAN Manager networks.

In addition, the SunPC ODI driver supports applications written to the popular Windows Sockets specification using Microsoft's `WINSOCK.DLL`—for example, Lotus Notes Client software.

SunPC software includes ODI-compliant IPX stack software only. Third-party TCP/IP, NetBEUI, and/or WinSock software can be used with the SunPC ODI driver.

One of the benefits provided by an ODI driver is that a workstation can be configured to use any of these protocols *simultaneously*—that is, the machine does not need to be dedicated to one protocol only. This means that the user can connect to more than one type of network server at a time.

For example, SunPC drivers **`R:`**, **`S:`**, and **`T:`** could be configured to be NetWare drives, and drivers **`U:`**, **`V:`**, and **`W:`** to be LAN Manager drives. The only limitations are the amount of RAM in the system, and the number of letters in the English alphabet.

Similarly, the SunPC ODI driver provides support for multiple network adapters or ports in a single system. Unlike establishing multiple network connections, however, SunPC currently supports the use of only one network interface at a time.

For more details concerning the SunPC Network Support refer to the *SunPC User's Guide*.

Network Interoperability *(cont.)*

The figure below illustrates how the ODI components included with SunPC work together. It also illustrates how other protocols, such as TCP/IP, can be used with the SunPC ODI driver.

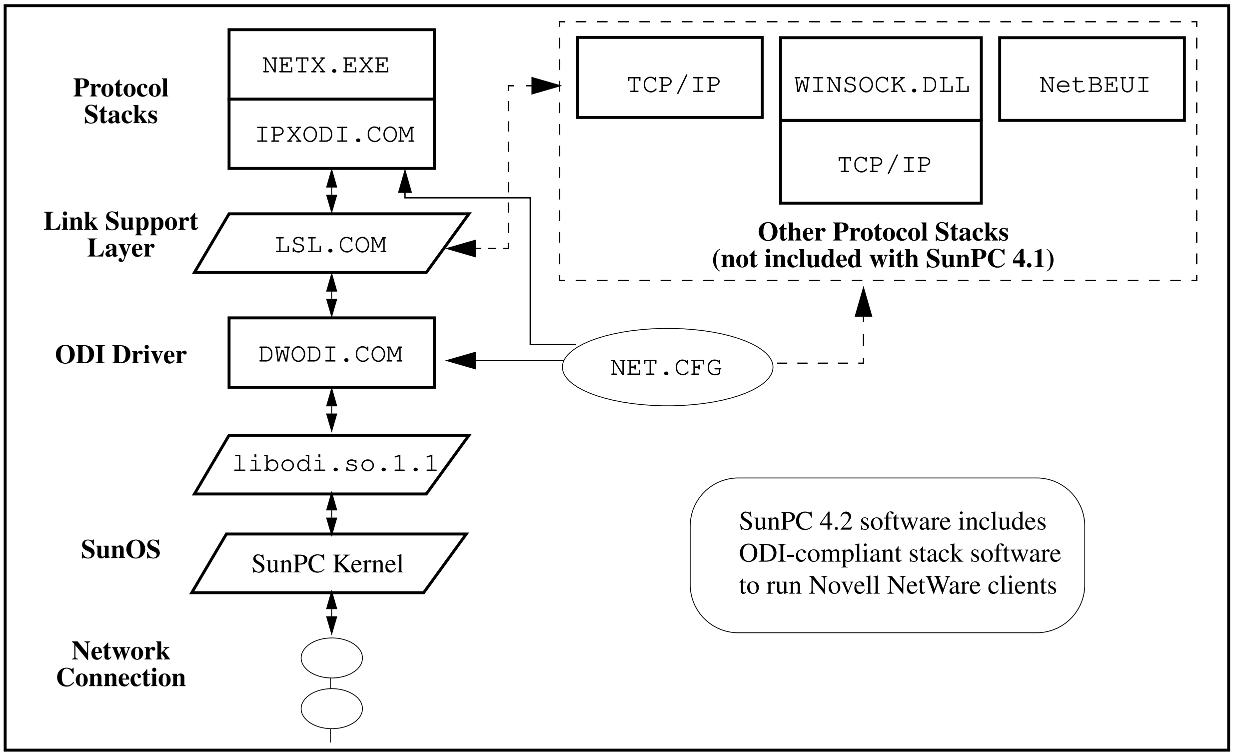

Figure 2. SunPC ODI driver implementation

SunPC™ Ordering Information

SunPC™ Marketing Part Number

Order Number	SunPC™ 4.2
X1129A-4.2-P	SunPC™ 133-MHz 5x86 co-processor card – Co-processor card, media, documentation, a single-user license and a single-user license for OpenDOS

Note: *SunSpectrum℠ support is not available for the SunPC product.*

Ordering

Upgrade Paths

The current design of the SunPC™ co-processor board does not allow for upgrades. Customers will be required to purchase a new card.